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ASiT The Association of Surgeons in Training

model in the workplace environment has been reported comprising the deep, surface rational and surface disorganised approaches.
Methods: We developed a 30 item inventory. These were distributed to SpRs in each Neurosurgical unit in the UK. Data was analysed using SPSS. Principal component extraction was used to examine the underlying factor structure. Reliability was assessed using Cronbach α.
Results: There was a 37.5% response rate. 3 factor solution similar to workplace approaches was found This analysis retained 15 items. Cronbach's alpha reliability score for the revised 15 item learning approaches inventory ranged from 0.65 for deep to 0.79 for surface rational. Mean score of learning approaches (out of 5) for all trainees in the study were 4.05 for deep, 3.22 for surface rational and 2.85 for surface disorganised. Possession of a higher degree did not alter learning approach. Completion of the exit exam yielded a higher score on deep approach.
Conclusions: This study validated a 15 item learning inventory. Findings from this study support the workplace model of learning approaches. Neurosurgical registrars in the UK utilise a deep approach to learning.

WHAT IS A TRAINEE WORTH? THE FINANCIAL IMPLICATIONS OF EMPLOYING SURGICAL TRAINEES AND ESTIMATING SERVICE COMMITMENT

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The Calman Report, Modernising Medical Careers and the European Working Time Directive have all changed the length and style of surgical training. Concern has been raised that a reduction in training hours has not been paralleled by a reduction in service commitment. The aim of this study is to evaluate the service commitment undertaken by ENT trainees and examine the cost to the NHS of employing trainees. Thirty-six ENT trainees were surveyed regarding their pay and number of patients seen per week in emergency and elective clinics. Their responses were used to calculate the cost to the NHS of employing the trainee, and the income generated though the “Payment by Results” (PbR) system. The average annual pay for ENT SHOs was £45,828 and £53,457 for registrars. Weekly PbR income generated by trainees was £1,605 for SHOs and £2,346 for registrars. The average annual net income (total income from clinical activity minus employer's costs) was £83,465 for SHOs and £122,023 for registrars. ENT trainees generate significant income for NHS Trusts through service commitment. Although service delivery is an accepted part of surgical training, it appears that this is an area that remains protected while training opportunities diminish.

CAN INJURY SEVERITY CLASSIFICATION SCORES ACCURATELY PREDICT LONG-TERM FUNCTIONAL OUTCOME IN OPEN TIBIAL FRACTURES?

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Introduction: Open fractures are generally the result of high-energy insults and threaten limbs and even life. To guide optimal Ortho-Plastic management, fracture classification systems have been developed. Similarly, with increasing modern demands on healthcare services, providers are required to illustrate their successes and thus scoring systems have been developed to review long-term outcome and ensure management is optimal. Though well studied, these systems are rarely assessed in tandem. This study therefore aims to examine links between the systems, using open tibial fracture data.
Methods: Patients were identified using the Morriston Hospital OLEF database, which records validated Gustillo-Anderson grading and Ganga Hospital Scores for fracture classification. Patients were followed-up and asked to complete the Enneking and EuroQoL-5D outcome assessment tools.
Results: No definitive patterns were evident on simple visual analysis, suggesting any relationship between the variables is, at best, a weak one. Statistical analysis confirms this, with Pearsons r-values of 0.028 (G + A:EQ-5D), −0.077 (GHS:EQ-5D), -0.142 (G + A:Enneking) and −0.018 (GHS:Enneking).
Conclusions: Since the severity:outcome relationship is generally accepted, and classification systems are well validated, these results suggest the assessment tools available are inadequate for the task. This study therefore illustrates the need for a more focussed outcome assessment tool for open fractures.

ENHANCING THE MECHANICAL PROPERTIES OF 3D BIOMIMETIC TYPE I COLLAGEN SCAFFOLDS USING RESTRICTED PLASTIC COMPRESSION FOR MUSCULOSKELETAL ENGINEERING

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Introduction: Existing equivalents for musculoskeletal engineering generally require days to manufacture, relying on cell activity to populate the scaffold. Plastic compression (PC) involves rapid cell-independent expulsion of water from cellular hydrogels creating mechanically stable, viable sheets in minutes. We investigated the effect of restricted PC, in order to produce structurally versatile scaffolds compared to the current spirals, whilst improving mechanical properties.
Methods: Type I collagen hydrogels (acellular and cell-seeded with human dermal fibroblasts) underwent restricted PC on their small axis using varying pressures [46 g/cm2, 91 g/cm2, 136 g/cm2 and secondary compression (SC)]. Fluid loss was derived from change in weight; morphological analysis of constructs assessed using SEM; mechanical properties were tested using a dynamic mechanical analyser (DMA); cell number determined by Alamar blue assay on days 0 and 2.
Results: SC & higher pressures produced statistically significant increases in fluid loss, collagen density, break stress and modulus. The higher cell density scaffolds however showed statistically significant decrease in cell viability at 41% at day 2 due to limitations in nutrient transfer.
Conclusion: Restricted PC results in statistically significant increased mechanical properties compared to spiraled constructs, but the current technique needs to be improved to maintain cell viability. This has prospects for in vitro tendon engineering and tendon modeling.

HISTOLOGICAL MARGIN ASSESSMENT FOR SCREEN-DETECTED BREAST CANCER

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Introduction: We aimed to assess the correlation between size, invasiveness, localising methods, operating surgeons and resection margins of screen-detected breast cancers undergoing conservative surgery.
Methods: Localisation involved Ultrasound and X-ray. Grades ranged from I-III. Two surgical units (A and B) were involved between 2004 and2008.